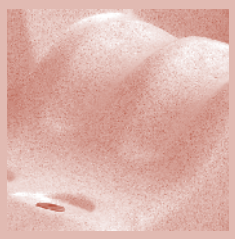
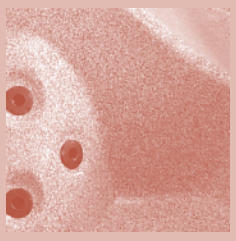
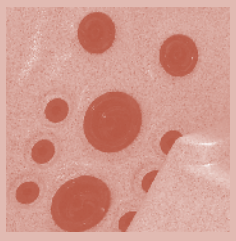
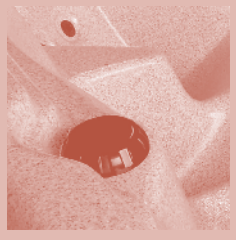


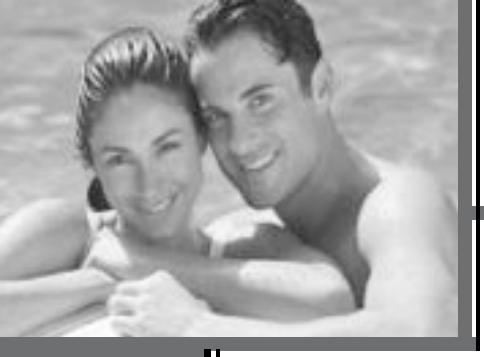






Owners Manual

International



Congratulations!

Your choice of a **Coyote Spa** indicates that you are devoted to excellence. The management and staff appreciate your patronage. At **Coyote Spas™** we believe a good foundation is required to build a superior product, both in design and philosophy. Canadian built with the finest materials and advanced technology, **Coyote Spas™** are made to perform...wherever you happen to live. To safely and effectively utilize your spa, we recommend that you take the time to read this manual before you hook-up and operate the spa. This guide will acquaint you with the operating features, hook-up procedures, and the maintenance and safety procedures, ensuring an enjoyable experience right from the start.

If you require additional information, please call your local **Coyote Spas™** dealer or check our website at www.coyotespas.com.

IMPORTANT!

In most cities and counties, permits will be required for the installation of electrical circuits or the construction of exterior surfaces (decks and gazebos). In addition, some communities have adopted residential barrier codes which may require fencing and/or self-closing gates on the property to prevent unsupervised access to a pool (or spa) by children under 5 years of age. Your **Coyote Spa** is equipped with a locking cover that meets the ASTM F1346-91 Standard for Safety Covers and as a result, is usually exempt from most barrier requirements. As a general practice, your local Building Department will inform you of any applicable barrier requirements at the time a permit is obtained for the installation of an electrical circuit. Your **Coyote Spas™** Dealer can provide information on which permits may be required.

Contents

Important Safety Instructions..... 4

Hyperthermia 7

Spa Specifications 8

Installation Instructions 8

Equipment Compartment & Wiring Diagram 10

Electrical Installation Instructions..... 11

Startup Procedures 13

Diverters & Venturi 14

Jets 15

Topside Control Panel 16

Spa Care & Maintenance 20

Water Maintenance 24

Common Spa Water Problems ~ Cause & Remedy 29

Troubleshooting Spa Problems 30

Limited Warranty 31

Read and Follow All Instructions

It is important to inform occasional users of the spa about the **DANGERS, WARNINGS,** and **CAUTIONS** listed in this manual before they use the spa.

CAUTION!	*DANGER!*	*WARNING!*
Indicates a situation in which damage to equipment or material may occur.	Indicates risk of injury.	Indicates information of critical importance.

Important Safety Instructions:

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

When installing and using this electrical equipment, basic safety precautions should always be followed, including:

1) **WARNING:** Do not use spa if power supply cable has been damaged.

2) **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

3) **WARNING:** A grounding wire connector is provided on this unit to connect a minimum 8.4mm^2 solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 1.5m (5 feet) of the unit.

4) **DANGER:** Risk of Accidental Drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this hot tub unless they are supervised at all times.

5) **DANGER:** Risk of Injury. The suction fittings in this hot tub are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the hot tub if the suction fittings are broken or missing. Consult your local dealer for assistance in choosing an appropriate replacement suction fitting.

6) **DANGER:** Risk of Electric Shock. Install at least 1.5m (5 feet), from all metal surfaces. As an alternative, a hot tub may be installed within 1.5m (5 feet) of metal surfaces if each metal surface is permanently connected (bonded) by a minimum 8.4 mm^2 solid copper conductor attached to the wire connector on the grounding lug, inside the equipment compartment on the equipment box.

7) **DANGER:** Risk of Electric Shock. All controls or devices accessible from spa must be powered by a maximum of 12vdc. Do not permit any electrical appliances not powered by a 12vdc or less within 1.5 m (5ft) of a hot tub.

8) **ELECTRICAL SUPPLY:** The electrical supply for this product must include a suitable circuit breaker to open all ungrounded supply conductors. The disconnect must be readily accessible and visible to the hot tub occupant but installed at least 1.5m (5 feet), from the hot tub water.

IMPORTANT!

This manual was written to ensure the proper use and installation of any Coyote Spa. Any modifications to the procedures outlined may result in your warranty being voided. Please read this manual to avoid any unnecessary damage to your spa and equipment.

9) **WARNING:** To Reduce the Risk of Injury:

a) The water in a hot tub should never exceed 40°C (104°F). Water temperatures between 38°C and 40°C (100°F to 104°F) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when hot tub use exceeds 10 minutes.

b) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit hot tub water temperatures to 38°C (100°F). If pregnant, please consult your physician before using a hot tub.

c) Before entering the hot tub, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature regulating devices may vary as much as +/- 2°C (5°F).

d) The use of alcohol, drugs, or medication before or during hot tub use may lead to unconsciousness with the possibility of drowning.

e) Persons suffering from obesity or a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a hot tub.

f) Persons using medication should consult a physician before using a hot tub since some medication may induce drowsiness, while other medication may affect heart rate, blood pressure, and circulation.

10) A bonding lug bar is provided on the side of your spa pack to accommodate grounding of entire spa. To reduce the risk of electric shock, connect the local common bonding grid in the area of the hot tub to these terminals with an insulated or bare copper conductor not smaller than 8.4mm^2.

11) All field-installed metal components such as rails, ladders, drains or other similar hardware within 3m (10ft) of the hot tub shall be bonded to the equipment grounding buss with copper conductors not smaller than 8.4mm^2.

12) Use the hot tub straps and clip tie downs to secure the cover when not in use. This will help to discourage unsupervised children from entering the hot tub. There is no representation that the cover, clip tie downs, or actual locks will prevent access to the hot tub.

WARNINGS!

WARNING: CHILDREN SHOULD NOT USE HOT TUBS WITHOUT ADULT SUPERVISION.

WARNING: DO NOT USE HOT TUBS UNLESS ALL SUCTION GUARDS ARE INSTALLED TO PREVENT BODY AND HAIR ENTRAPMENT.

WARNING: PEOPLE WITH INFECTIOUS DISEASES SHOULD NOT USE A HOT TUB.

WARNING: TO AVOID INJURY, EXERCISE CARE WHEN ENTERING OR EXITING THE HOT TUB.

WARNING: DO NOT USE DRUGS OR ALCOHOL BEFORE OR DURING THE USE OF A HOT TUB TO AVOID UNCONSCIOUSNESS AND POSSIBLE DROWNING.

WARNING: PREGNANT OR POSSIBLY PREGNANT WOMEN SHOULD CONSULT A PHYSICIAN BEFORE USING A HOT TUB.

WARNING: WATER TEMPERATURE IN EXCESS OF 38°C (100°F) MAY BE INJURIOUS TO YOUR HEALTH.

WARNING: BEFORE ENTERING THE HOT TUB, MEASURE THE WATER TEMPERATURE WITH AN ACCURATE THERMOMETER.

WARNING: DO NOT USE A HOT TUB IMMEDIATELY FOLLOWING STRENUOUS EXERCISE.

WARNING: PROLONGED IMMERSION IN A HOT TUB MAY BE INJURIOUS TO YOUR HEALTH.

WARNING: DO NOT PERMIT ELECTRIC APPLIANCES (SUCH AS LIGHT, TELEPHONE, RADIO, TELEVISION, ETC.) WITHIN 1.5M (5 FEET) OF THIS HOT TUB.

CAUTION: MAINTAIN WATER CHEMISTRY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

WARNING: THE USE OF ALCOHOL OR DRUGS CAN GREATLY INCREASE THE RISK OF FATAL HYPERTHERMIA IN HOT TUBS.

WARNING: DO NOT USE SPA IF POWER SUPPLY CABLE HAS BEEN DAMAGED.

Hyperthermia

Prolonged immersion in hot water may induce hyperthermia.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 37°C (99°F). The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include:

- Unawareness of impending hazard;
- Failure to perceive heat;
- Failure to recognize the need to exit hot tub;
- Physical inability to exit hot tub;
- Fetal damage in pregnant women; and
- Unconsciousness and danger of drowning.

WARNING!

The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in hot tubs or spas.

INTERNATIONAL SPA SPECIFICATIONS

	Outside Dimensions	Height	Heater (Watts)	Water Capacity	Dry Weight	Filled Weight*	Weight per square meter	Electrical Requirements
Bandit	180 cm x 206 cm	80 cm	5500	800L	160 Kg	1280 Kg	346 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuts
Outlaw	220 cm Round	100 cm	5500	1000 L	320 Kg	1800 Kg	470 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuts
Drifter	200 cm x 231 cm	93 cm	5500	1000 L	340 Kg	1880 Kg	407 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuts
Renegade	231 cm x 260 cm	93 cm	5500	1535 L	390 Kg	2565 Kg	427 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuts
Chieftain	231 cm x 290 cm	93 cm	5500	1700 L	410 Kg	2830 Kg	422 Kg per square meter	230 Volt, 32 Amp Single Phase or 2-16 Amp or 3-16 Amp RCD Protected Circuts

*Filled weight includes weight of water and maximum recommended number of people in the spa.(Average weight per person=80 Kg)

Installation Instructions

Site Preparation

Make sure you ensure the following:

- Always put your spa on a structurally sound, **LEVEL** surface. A filled spa can weigh a great deal. Make certain that the location you choose can support the weight of your filled spa.

- Locate your equipment compartment, which houses all of the electrical components, in a place where your will have easy access for periodic spa care and maintenance.

- Allow adequate access to all other access panels for service.

Outdoor Ground Level Installation

No matter where you install your new spa, it's important that you have a solid foundation for support. If using patio stones, they should be at least two inches thick and twelve inches square. Even with stones in place, the spa will possibly settle and become unlevel, and may require re-leveling over time.

Deck Installation

To be certain your deck can support your spa, you must know the deck's maximum load capacity. Consult a qualified building contractor or structural engineer. To find the weight of your spa, its contents and occupants, refer to the Spa Specification chart. This weight per square foot must not exceed the structure's rated capacity, or serious structural damage could result.

Your Coyote Spas™ Dealer can help you with local information such as zoning regulations and building codes.

WARNING! WARNING!

We recommend that the Coyote Spa™ be installed above ground. Consult a licensed building contractor to design or evaluate your custom decking requirements.

Equipment Compartment and Wiring Diagram

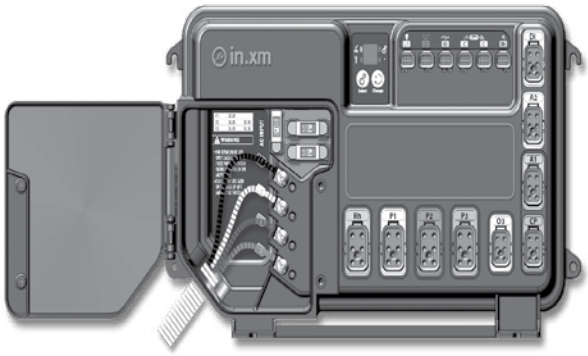
WARNING!
All electrical hookups must be performed by a licensed electrician!

Power Input

All Coyote Spas are tested for the following:

230 VAC, 50 Hz, 32 A (International)
Connect the power input wires to the terminal block labeled “AC-Input”. Make sure to respect the alignment and that the screws are properly tightened.

Electrical wiring



Grounding lug

Warning!

This product must always be connected to a circuit protected by a residual current device.

Proper wiring of the electrical service box, RCD and in.xm terminal block is essential!

Check your electrical code for local regulations. Only copper wire should be used, never aluminum.

To install the wiring for the in.xm spa control, you'll need a Phillips screwdriver, a14 mm nut driver or a flat screwdriver.

Loosen the 2 screws of the spa pack door and open it. Remove 20 cm of cable insulation. Strip away 2.5 cm of each wire insulation. Pull the cable through the cutout of the box and secure it with a strain relief (trade size 2.5 cm strain relief; hole diameter: 3.4 cm). Make sure that only the uncut sheathing is clamped at this opening. Push the color-coded wires into the terminals as indicated on the sticker and use the 14 mm wrench or flat screwdriver to tighten the bolts on the terminals.

After making sure wire connec-tions are secure, push them back into the box and close the door. Tighten the 2 screws of the spa pack door.

Connect the bonding conductor to the bonding lug on the left side of the in.xm spa pack
(a grounded electrode conductor shall be used to connect the equipment grounding conductors).

CAUTION!
Do not turn on power to the spa until the spa is filled to the required level. Running the spa pump without water could cause immediate damage and invalidate your warranty!

Electrical Installation Instructions

COYOTE SPAS™ MUST BE WIRED IN ACCORDANCE WITH ALL APPLICABLE LOCAL ELECTRICAL CODES. ALL ELECTRICAL WORK SHOULD BE DONE BY AN EXPERIENCED, LICENSED ELECTRICIAN AND APPROVED BY A LOCAL BUILDING/ELECTRICAL INSPECTION AUTHORITY. WE RECOMMEND THE USE OF APPROPRIATE ELECTRICAL CONDUIT, FITTINGS AND WIRE FOR ALL CIRCUITS. The spa can be wired with one 32 amp 230 volt single circuit, two 16 amp circuits, or three 16 amp circuits (three phase).

We recommend an electrical subpanel containing appropriate RCD breaker is used to supply power and protect the spa. The grounding conductor must be at least the same gauge as the line conductors, but not less than 6mm^2 solid copper bond wire is also required. Mount the subpanel in the vicinity of the spa, but not closer than five feet away (1.5m), in accordance with all local codes. A qualified electrician must install the electrical circuit.

1. This hot tub must be permanently connected (hard-wired) to the power supply. No plug-in connections or extension cords are to be used in conjunction with the operation of this hot tub. Supplying power to the hot tub which is not in accordance with these instructions will void both the independent testing agency listing and the manufacturer's warranty.

2. The power supplied to this hot tub must be a dedicated circuit with no other appliances or lights sharing the power provided by the circuit.

3. Do not use aluminum wire.

4. The appliance should be supplied through a residual Current device (RCD) with a rated tripping current not exceeding 30mA.

5. To gain access to the hot tub's power terminal block, remove the four screws securing the two cabinet panels on the side of the spa containing the CE label. Then open the door to the control box.

6. Important: To maintain TUV Ratings, A water resistant strain relief (rated IPx5 or better) must be used on the Power Supply Cable where it enters the pack. We recommend Heyco Liquid Tight Straight Through Fittings.

Note: For cables 12.4mm through 20mm Part # M4346
For cables 15.0mm through 25.4mm Part # M4348

7. Connect wires, color to color, on terminal blocks TB1. TIGHTEN SECURELY! All wires must be hooked up or damage could result.

8. Close the control box door and reinstall the cabinet side panel.

WARNING: Fill the spa with water before turning on the power.

Once your spa has been filled with water, turn it on and test all of the circuit breakers.

NOTE: If the RCD breaker trips immediately, verify that the BLUE neutral wire is connected into the load neutral in the breaker. Each breaker should be tested prior to each use. Here's how:

1. Push the "TEST" button on each RCD breaker, and observe it click OFF.

2. Push the breaker switch to the OFF position (to ensure that it has completely disengaged), then push the breaker switch to the ON position.

If any of the RCD breakers fails to operate in this manner, your spa may have an electrical malfunction, and you may be at risk of electrical shock. Turn off all circuits and do not use the spa until the problem has been corrected by an authorized service agent.

Startup Procedures

IMPORTANT:
Your Coyote Spa has been thoroughly tested during the manufacturing process to ensure reliability and long-term customer satisfaction. Before filling the spa, wipe the spa shell clean with a soft rag.

The following instructions must be read and followed exactly to ensure a successful startup or refill.

1) Ensure the electrical connections have been made in accordance with this manual and that the supply cable has not been damaged in any way.

2) Ensure all O-Rings have been installed into unions and unions have been tightened sufficiently.

3) Ensure all ball valves are open, and the drain has been closed.

4) Fill the spa with water to approximately 4" (10cm) above the top of the filter bucket with a garden hose.

5) Once the spa is filled to the proper level, turn the power to the spa on, by turning on the RCD breaker in your panel. Watch the display on the topside control. After power-up, the display will blink until a key is pressed. This feature is to let you know that the set point and other system parameters are at their default settings.

6) The jet pump, heating system and all internal plumbing will achieve a partial prime as the spa is filled. Once the spa is full, turn each pump on to complete prime.. Once the jet system is fully operational (as indicated by strong, non-surging jets), priming of the spa is complete. Weak or surging jets are an indication of a low water level condition or clogged filter cartridges.

7) Adjust the chemicals and balance the water according to your dealer's instructions. A guideline is also included in this manual, under the Water Maintenance Section.

8) Set the temperature control to the desired temperature (between 38°C and 40°C or 100°F and 104°F), then place the vinyl cover on the spa and allow the water temperature to stabilize (approximately 16 hours). Make sure you secure the cover in place using the cover locks. Periodically check the spa water temperature. When the water temperature climbs above 29°C (84°F), proceed to the next step.

CAUTION!
Do not turn on power to the spa until the spa is filled to the required level. Running the spa pump without water could cause immediate damage and invalidate your warranty!

9) Test and Adjust Sanitizer level (Chlorine ideal 1 - 3 ppm or Bromine ideal 3 - 5 ppm).

10) The spa temperature is pre-programmed to reach 35°C (95°F), and will normally do so within 16 to 24 hours. You may raise the water temperature by pressing the TEMP (^) button on the control panel, or lower it by pressing TEMP (v) button. After a few hours, the water temperature will remain within 1 degree of your selected temperature.

*Diverter Jetting System**

With your Diverter Jetting System, you can control the massaging action of your spa.* On select models. Using the diverter, the jets are activated in groups, known as jet systems. The jetting systems are selected by turning the diverter from one side to the other, or select both by leaving the diverter in the middle. The number of diverters you will have will depend on the model of Coyote Spas™ you have. Feel free to consult your local dealer with any questions regarding the function of this system, or just jump in and experiment for yourself.

Venturi Controls

The Venturi Controls allow you to control the intensity of the massage at each jet by adjusting the mixture of air and water. Simply turn the venturi control lever counter clockwise for a stronger flow and clockwise for a softer flow.

Jets

Directional Luxury Hydromassage Jets

The Directional Luxury Hydromassage jets allow you to aim the water in the direction that feels best. These jets are designed to massage the muscles in your upper back, shoulders and neck. These jets are adjustable by turning the face of the jet clockwise for a stronger flow and counter-clockwise for a softer flow and eventually off.

Pulsing Luxury Hydromassage Jets

Approximently half of the water jets in each coyote spa are pulsing. These jets provide a pulsing massage feeling and are all adjustable by turning the face of each jet.

Chrome Jet Option Package

The Chrome jets are made from rust resistant stainless steel; however improper water chemistry may cause rusting. Same great massage quality in a nicer looking package.

Topside Control Panel

IMPORTANT: Before performing any service on the spa, contact your local Factory Authorized Dealer. Make a visual inspection of the spa to get an understanding of what condition it may be in and if anything looks out of the ordinary. If any part appears to be damaged, loose or missing, do not proceed. Contact your Factory Authorized Dealer immediately.

Your spa control has been specifically designed so that by simply connecting the spa to its properly grounded source, and following the start-up procedures in this manual, the spa will automatically heat to the set temperature. You can adjust the set temperature by pressing the up or down arrows on your control panel to the desired temperature. When your spa is heating the heat indicator on your control panel will be on.

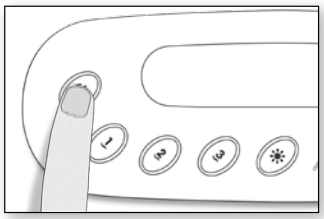
Power-up Detection

After a power-up, the display will blink until somebody presses a key. This feature lets you know that a power failure has occurred and all settings have returned to default.

Temperature displayed in Fahrenheit or Celsius

The temperature can be displayed in Fahrenheit or Celsius. Press the program key 6 times it will display either Fahrenheit or Celsius, use the up or down key to change setting.

The topside control panel has buttons which you press to set the temperature, initiate the filtration cycle, turn the light on, and activate or deactivate the pump(s) and blower. The Topside control panel display responds to let you know you have pressed a button, and that the selected function has been performed.



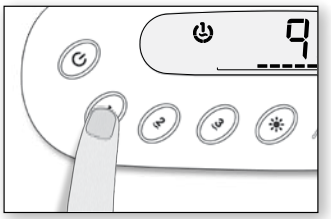
On/Off key ⏻

Stops functions of spa accessories automatically and returns to normal functions after 40 minutes

Standby Mode : Use **On/Off** key to pause all pumps*. Progress bar will display the remaining time before the system automatically exits Standby mode (user can also exit Standby mode at any time by pressing again on **On/Off** key). In order to warn the user, the spa light will flash for a few seconds before the exit of

Standby mode and restart the pumps. The "Stby" message is also displayed during Standby mode.

** Pump will stay turned on if there is a request for more heat.*



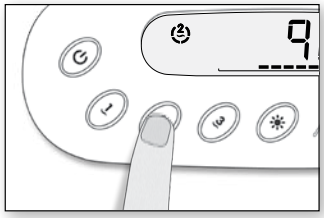
Pump 1 key 1

Press **Pump 1** key to turn Pump 1 on at low speed.

Press a second time to turn pump to high speed (with a dual-speed pump).

A third time turns pump off.

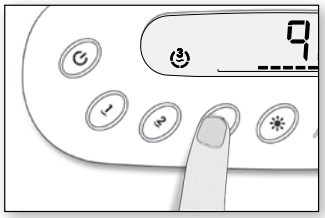
A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.



Pump 2 key 2

Press **Pump 2** key to turn Pump 2 on at high speed.

A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

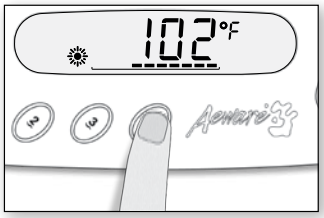


Blower key 3

Press **Blower** key to turn Blower on.

Press a second time to turn blower off.

A built-in timer automatically turns blower off after 20 min-utes, unless blower has been manually deactivated first.

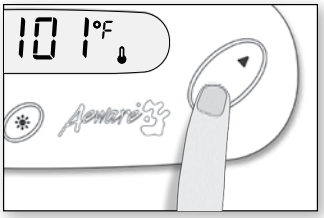


Light key ☀

Press **Light** key to turn light on.

Press Light key again to turn light off

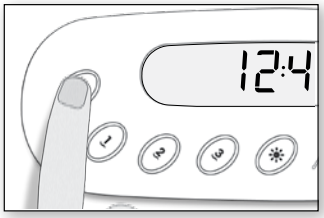
A built-in timer automatically turns light off after 2 hours, unless it has been manually deactivated first.



Up/Down keys ▲▼

Use **Up** or **Down** key to set desired water temperature. The temperature setting will be displayed for 5 seconds to confirm your new selection.

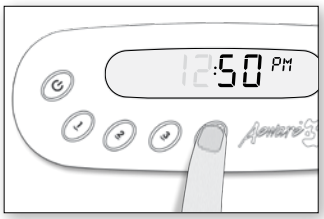
The "Set Point" icon indicates that the display shows the desired temperature, NOT the current water temperature!



Program key ⏻

Use **Program** key to display time or enter Programming menu by pressing and holding key. In Programming mode, the following parameters can be set: time, filter cycle start time, filter cycle duration, filter cycle frequency, and temperature unit.

Note: Light key is used as Program key if this key is not present.



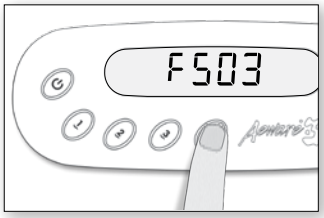
Setting the time

Enter Programming mode by holding **Prog**. key pressed down for 3 sec. The display will show the current time setting.

Setting the hour:
Use **Up** or **Down** arrows to change hour setting (**AM/PM**).

Setting the minutes:
Press **Prog**. key a second time.

Use **Up** or **Down** key to change hour setting.



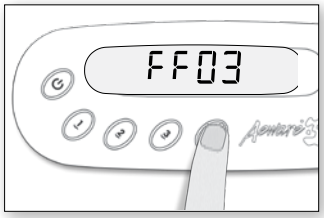
Setting filter cycle start time

To program the filter cycle, you must enter these parameters: the start time, duration and frequency. During a filter cycle, pumps run for one min-ute to purge the plumbing, then Pump 1 runs for the programmed number of hours.

Press **Prog**. key a third time.

The display will show **FSxx**, with "xx" representing the starting hour of the first filtration cycle.

Use **Up** or **Down** key to change setting.



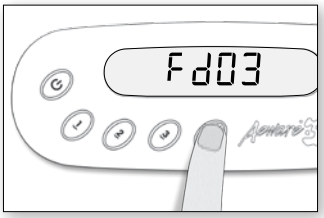
Setting filter cycle duration

Press **Prog**. key a fourth time.

The display will show **Fdxx**, with "xx" representing the duration in hours.

Choose from 1 to 4

Use **Up** or **Down** key to change setting.

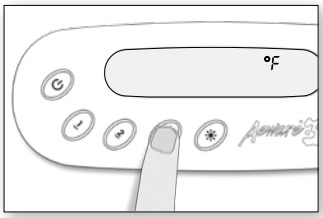


Filter cycle frequency

Press **Prog**. key a fifth time.

The display will show **FFxx**, with "xx" representing the number of filter cycles per day (up to 4).

Use **Up** or **Down** key to change setting.



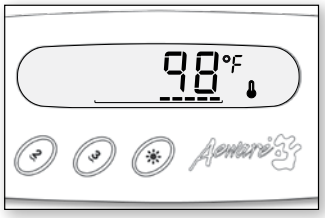
Setting temperature unit

Water temperature can be displayed in either Fahrenheit (˚F) or Celsius (˚C).

Press **Prog**. key a sixth time.

The display will show either ˚F or ˚C.

Use **Up** or **Down** key to change setting.



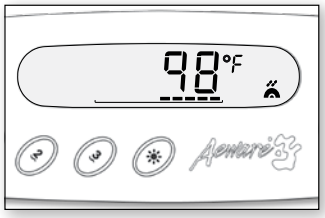
Water temperature regulation

In a regulation cycle, the system first generates water flow through the heater housing and the plumbing, in order to ensure accurate water temperature readings as well as avoiding heater activation in dry conditions.

After verifying pump activation and taking a water temperature reading if required, the system automatically turns the heater on to reach and maintain water temperature at Set Point.

Cooldown

While performing these tasks, the heater is not allowed to turn on and its icon flashes. The heater is not allowed also to come on throughout the cool down period of the heater element.



Smart Winter Mode

Our Smart Winter Mode protects your system from the cold by turning pumps on several times a day to prevent water from freezing in pipes.

Spa Care and Maintenance

Your Coyote Spa is manufactured from the highest quality, most durable materials available. Even so, the spa care and maintenance program you develop will ultimately determine how long your spa and its individual components will last. Regular maintenance following the advice in this section will help you to protect your investment.

Draining the Water

Detergent residues and dissolved solids from bathing suits and chemicals will gradually accumulate in your spa's water. Normally, in about three to four months the water will become difficult to balance and should be replaced. Showering without using soap prior to entering the spa or using only the rinse cycle when laundering your bathing suit will help to reduce detergent residue in the spa water. However, foam problems are more likely to be caused by a build up of organic pollutants in the spa-mostly by body oils. If you're using your spa frequently with a high bather load the water will need to be replaced more often. Spa water gradually loses quality because of the build up of unfilterable pollutants.

IMPORTANT: Remember to change your water every three to four months.

To Drain Your Spa:

1. Trip the RCD breaker located in the subpanel or the quick disconnect.

2. All Coyote spas have an external drain that can be attached to a typical garden hose for convenient draining. Simply locate the drain on the side of the floor, pull the nozzel out, remove cap, and attach your hose. Once the hose is attached, push the nozzle in slightly to open the internal valve and the spa will start draining.

   Note: All Coyote Spas™ models will drain almost completely through the drain. Equipment such as the pump(s) and heater will drain. Any water remaining in the plumbing or equipment after draining will only need to be removed if the spa is being winterized.

3. When empty, inspect the spa shell and clean as required.

4. Close the drain valve.

5. Refill the spa **BEFORE** restoring power.

IMPORTANT: Always clean and rotate the filter cartridges, every couple of weeks, and each time the spa is drained for cleaning. Or, if using disposable filters change as needed or every 3 months otherwise.

Filtration System

Important: The use of Clarifiers and Foam inhibitors is not recommended with Arctic Pure® Disposable filters!

Coyote Spas™ are equipped with balanced filtration, meaning that the filter cartridges are sized to meet the needs of the pump system. As with any water filtering system, the filter cartridge may become clogged, resulting in reduced water flow. It is important to maintain a clean, unobstructed filter system. We recommend replacing your filter with an Arctic disposable filter every three (3) months.

Filter Cartridge Removal and Installation

1. Shut the spa down using the on/off button on the topside control panel.

2. Remove the filter basket by rotating the top outside ring counterclockwise and lifting.

3. Remove the filter cartridge.

4. Clean any debris out of the skimmer basket.

5. To reinstall the filter cartridge, reverse the order of steps in which it was removed.

Care of the Spa Shell

Your Coyote Spas™ has a fiberglass reinforced, cast acrylic shell. Stains and dirt generally will not adhere to your spa's surface. A soft cloth or sponge should easily remove most dirt. Most household chemicals are harmful to your spa's shell.

Sodium bicarbonate (baking soda) or vinegar can also be used for minor surface cleaning. Always thoroughly rinse off any spa shell cleaning agent with fresh water.

Service Notes:

1. Iron and copper in the water can stain the spa shell if allowed to go unchecked. Your Coyote Spas™ Dealer stocks a Stain and Scale Inhibitor to use if your spa water has a high concentration of dissolved minerals.

2. The use of alcohol or any household cleaners other than those listed to clean the spa shell surface is NOT recommended. DO NOT use any cleaning products containing abrasives or solvents since they may damage the shell surface. Damage to the shell by the use of harsh chemicals in not covered under the warranty.

MANUAL SAFETY COVER

⚠ WARNING

AVOID DROWNING RISK

KEEP CHILDREN AWAY. CHILDREN OR OBJECTS CANNOT BE SEEN UNDER COVER.
REMOVE COVER COMPLETELY BEFORE ENTRY - BATHERS ENTRAPMENT POSSIBLE.
NON-SECURED OR IMPROPERLY SECURED COVERS ARE A HAZARD.
FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN INJURY OR DROWNING.

⚠ AVERTISSEMENT

ÊVITEZ DE NOYER LE RISQUE

ENFANTS DE SUBSISTANCE PARTIS. DES ENFANTS OU LES OBJETS NE PEUVENT PAS ÊTRE VUS SOUS LA COUVERTURE.
ENLEVEZ LA COUVERTURE COMPLÊTEMENT AVANT L'BAIGNEUR - OCCLUSION D'ENTREE POSSIBLE.
LES COUVERTURES NON-FIXÊES OU INCORRECTEMENT FIXÊES SONT UN RISQUE.
LE MANQUEDE SUIVRE TOUTES LES INSTRUCTIONS PEUT AVOIR COMME CONSÊQUENCE LES DOMMAGES OU LA NOYADE.

Care of the Spa Cover

ATTENTION: The cover is a manual safety cover that meets or exceeds all prevailing requirements of ASTM Standards for spa safety covers when installed and used correctly as of the date of manufacture. Non-secured or improperly secured covers are a hazard. Always open the cover to its fully open position before use. Be sure to inspect the cover for premature wear or deterioration. Over time, with use, there is a chance of normal cover wear and deterioration. To properly maintain your cover see directions below.

Vinyl Cover

The vinyl spa cover is an attractive, durable foam insulation product. Monthly cleaning and conditioning are recommended to maintain its beauty.
To clean and condition the vinyl cover:

1. Remove the cover from the spa and gently lean it against a wall or fence.

2. With a garden hose, spray the cover to loosen and rinse away dirt or debris.

3. Using a large sponge and/or a soft bristle brush, and a very mild soap solution or baking soda, scrub the vinyl top in a circular motion. Do not let the vinyl dry with a soap film on it before it can be rinsed clean.

4. Scrub the cover's perimeter and side flaps. Rinse clean with water.

5. Rinse off the underside of the cover with water only (use no soap), and wipe it clean with a dry rag.

6. To condition the cover after cleaning, apply a thin film of Arctic Pure® Cover Renew to the vinyl surface and buff.

The Standard Cabinet

The standard cabinet on coyote spas is made with Premium Vinyl house siding. It should require no maintenance and can be hosed off if dirty. If damaged cabinet pannels can be removed and replaced!

LED Light Replacement

All Coyote Spas™ come equipped with a blue LED (light emitting diode) light for night-time use. The optional Peyote Light comes with a multicolour LED. Should you wish to change either light, follow these simple steps:

1. Make sure the light is turned off, by checking the topside to see if the light icon is not showing.
2. Remove the screws securing the equipment access doors; remove the doors.
3. Locate the lamp assembly, which is secured into the light housing. Carefully rotate the lamp assembly counter-clockwise until it comes off the light housing.
4. Carefully disconnect any cables. Remove the LED assembly from the socket and replace with a new assembly. Reconnect the cable(s). NOTE: take care to insert the plug in the correct orientation, or you may damage the connectors.
5. To reinstall, rotate the lamp assembly clockwise onto the light housing until secure.

Vacation Care Instructions

If you plan to be away from home for 7 - 14 days, follow these instructions to ensure that the water quality of your spa is maintained.

1. Adjust pH as needed.
2. Ensure you have sufficient sanitizer to last until you return.
3. Shock the spa with Arctic Pure® Spa Boost or Refresh.
4. Lower the temperature.

Upon your return:

1. Shock the spa with Arctic Pure® Spa Boost or Refresh.
2. Ensure you have sufficient sanitizer for regular use.
3. Return the temperature to its original setting. You can use your spa once the residual sanitizer level falls within the ideal range.

Note: If you will not be using your spa for more then 14 days and a neighbour, friend or an outside maintenance service is not available to check and balance the water chemistry, draining or winterizing the spa is recommended.

Winterizing your spa

If you plan to leave your spa unused for a long period of time in severely cold weather, you should drain the spa to avoid accidental freezing due to a power or equipment failure.

We recommend your local authorized dealer winterize your spa. Freezing can severely damage your spa. Improper winterizing of your spa can void your warranty.

To Restart Spa:

Reinstall the filter cartridges; close the drain valve. Follow the Start-up and Refill procedures.

Water Maintenance

It's important to have clean water. Water maintenance is one of the least understood, yet most important area of spa ownership. Your dealer can guide you through the process of achieving and maintaining perfect water in your spa, given your local conditions. Your program will depend on your water's mineral content, how often you use your spa, and how many people use it. Here is our suggested step-by-step program:

General Information

There are three fundamental areas of water maintenance. They are (1) Water Filtration, (2) Water Sanitation, and (3) Chemical Balance/pH Control.

Although your spa's filter system is working several hours a day to remove particles from your water, it does not remove bacteria or viruses. Water sanitation is the responsibility of the spa owner. It can be achieved through the regular and periodic (daily, if necessary) addition of an approved sanitizer. The sanitizer will chemically control the bacteria and viruses present in the spa water. Bacteria and viruses can grow quickly in undersanitized spa water. The water's chemical balance and pH control are also the responsibility of the spa owner. You will have to add chemicals to maintain proper levels of Total Alkalinity (TA) and pH. Proper water balance and pH control will minimize scale buildup and corrosion of metals, extend the life of the spa, and allow the sanitizer to work at maximum efficiency.

Methods For Testing the Spa Water

Accurate water testing and analysis are an important part of effectively maintaining your spa water. To follow the Coyote Spas™ recommended program, you must have the ability to test for:

- Total Alkalinity (TA)
- pH
- Sanitizer

Although reagent test kits provide the highest level of accuracy, test strips are the most convenient testing method used by many spa owners. Keep in mind that test strips are susceptible to heat and moisture contamination, which will result in inaccurate readings.

IMPORTANT: Always read and carefully follow the directions included with the test kit or test strips to ensure the accuracy of the test results.

Hints For Successful Water Testing

When using the reagent test kit:

- Always take water samples 12-18 inches (30- 45 cm) below the water surface.
- Rinse the test cells before and after each use.
- Do not dispose of test samples into the spa water.

- When adding drops of chemicals from the kit (the reagents) into the test block, hold the bottle vertically and add the drops slowly to be sure the correct quantity is used.
- The reagents should be replaced on a yearly basis to maintain the accuracy of the test results.

Basic Chemical Safety

When using chemicals, read the labels carefully and follow directions precisely. Though chemicals protect you and your spa when used correctly, they can be hazardous in concentrated form. Always observe the following guidelines:

- ALWAYS KEEP CHEMICALS OUT OF CHILDREN'S REACH.
- NEVER MIX CONCENTRATED CHEMICALS TOGETHER.
- ALWAYS THOROUGHLY RINSE ANY CONTAINER USED TO MIX CHEMICALS AFTER USE.
- ALWAYS RINSE OUT ANY EMPTY CHEMICAL STORAGE CONTAINER BEFORE DISPOSAL.
- Accurately measure the quantities specified. Do not overdose your spa. Amount required will vary depending on water condition, quantities to be used are only guidelines.
- Store chemicals in a cool, dry, well-ventilated place.
- Always keep chemical containers closed when not in use.
- Don't inhale fumes or allow chemicals to come in contact with your eyes, nose, or mouth. Wash your hands immediately after use.
- Follow the emergency advice on the product label in case of accidental contact.
- Never smoke around chemicals. Some fumes can be highly flammable.
- Don't store any chemicals in the spa equipment compartment.

Adding Chemicals to the Spa

Most chemicals (does not include any slow dissolving chemicals) can be added directly to the spa while the pump(s) is running on high speed, for a minimum of 10 minutes. Allow at least 30 minutes after adding chemicals before retest.

IMPORTANT "SUPER CHLORINATION/NON-CHLORINE SHOCK TREATMENT"

NOTE: After administering a super chlorination treatment or non-chlorine shock to your spa, leave the cover open for a minimum of 20 minutes to allow the oxidizer gas to vent. A high concentration of trapped oxidizer gas which may exist as a result of the shock treatment (not daily sanitation) may eventually cause discoloration or vinyl degradation to the bottom of the cover and pillows. This type of damage is considered chemical abuse and is not covered under warranty.

The Coyote Spas™ Water Maintenance Program

Following the Coyote Spas™ water maintenance program will save you time and frustration and ensure clear, clean spa water.

Remove Excess Minerals

Most tap water has minerals such as Calcium, Copper, Iron, Manganese and Sodium in it. The circulation of such water can cause the erosion of metals from spa equipment, which can present possible scaling and staining problems in your spa.

To remove these simply fill your spa with an Arctic Pure® Pre-Filter. In extreme cases of source water with high minerals (such as some well water):

1. We recommend you add 3 1/2 tablespoons (48 grams) of Arctic Pure® Best Defense per 1000 litres (265 gallons) of water while filling your spa.
2. Also, as water evaporates from your spa and new water is added, the amount of dissolved minerals will increase. The spa water may eventually become "hard" (Calcium Hardness too high) enough to damage the heater by calcifying its surface. To protect against these problems add 1tablespoon (14 grams) per 1000 litres (265 gallons) of Arctic Pure® Best Defense weekly.

Balance the Total Alkalinity (TA)

1. The recommended Total Alkalinity (TA) for your spa water is 125-150 ppm.

2. Total Alkalinity is a measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA is referred to as the water's "pH buffer". In other words, it's a measure of the ability of the water to resist changes in pH level.

3. If the TA is too low, the pH level will fluctuate widely from high to low. Fluctuations in pH can cause corrosion or scaling of the spa components. Low TA can be corrected by adding Arctic Pure™ Perfect Balance.

4. If the Total Alkalinity is too high, the pH level will tend to be high and may be difficult to bring down. It can be lowered by using Arctic Pure® Adjust Down.

5. Once the TA is balanced, it normally remains stable, although some sanitizers, and the addition of more water with a high or low alkalinity will raise or lower the TA reading of the water.

6. When the Total Alkalinity is within the recommended range, proceed to the next step.

Balancing the PH

1. We recommended a pH range for your spa water of 7.2-7.6.

2. The pH level is the measure of acidity and alkalinity. Values above 7 are alkaline; those below 7 are acidic. Maintaining the proper pH level is extremely important for:
   - Optimizing the effectiveness of the sanitizer.
   - Maintaining water that is comfortable for the user.
   - Preventing equipment deterioration.

3. If the spa water's pH level is too low, the following may result:
   - The sanitizer will dissipate rapidly.
   - The water may become irritating to spa users.
   - The spa's equipment may corrode.

   If the pH is too low, it can be increased by adding Arctic Pure® Adjust Up to the spa water.

4. If the pH level is too high, the following may result:
   - The sanitizer will become less effective.
   - Scale will form on the spa shell surface and the equipment.
   - The water may become cloudy.

If the pH is too high, it can be decreased by adding Arctic Pure® Adjust Down to the spa water.

5. It is important to check the pH on a regular basis. The pH will be affected by the bather load, the addition of new water, the addition of various chemicals, and the type of sanitizer used.

6. When the pH is within the recommended range, proceed to the final step.

Calcium Hardness (CH)

1. Most spa manufacturers recommend a Calcium Hardness (CH) level for your spa of 150-200ppm. However, we do not recommend adding calcium to your spa if your water is above 100ppm, or if your incoming water has a very low level of calcium hardness.

2. Calcium Hardness is a measure of the total amount of dissolved calcium in the water. It is believed that calcium helps control the corrosive nature of water. Calcium has a tendency to precipitate (fall out of suspension) in high temperatures and high pH levels.

Warning: When calcium falls out of suspension it can collect on the heater and pump, and shorten their life.

3. Any natural corrosiveness in the water can be combatted by maintaining a slightly higher Total Alkalinity Level.

Sanitize the Spa

Sanitizer is extremely important for killing algae, bacteria and viruses, and preventing unwanted organisms from growing in the spa. At the same time, you don't want too high a sanitizer level, or it can irritate your skin, lungs and eyes.

1. Always maintain the sanitizer level in your spa at the recommended level for each type of sanitizer.
2. We recommend the following sanitizers:
   Chlorine System:
   - Arctic Pure® Chlorine Tablets
   - Arctic Pure® Refresh
   - Arctic Pure® Spa Boost

   Bromine System:
   - Arctic Pure® Brominating Tablets
   - Arctic Pure® Refresh
   - Arctic Pure® Peak Boost

Important: Sanitizers are acidic and will decrease the Total Alkalinity. Regular testing and balancing of TA is extremely important with these products.

Important: Always remove the floating dispenser while the spa is in use. Remove dispensers with a plastic bucket (keeping submersed) and store out of reach of children until spa use has ended.

Using Chlorine System

CAUTION: The use of personal protective equipment (rubber/latex/vinyl gloves, eye protection) is recommended while handling the dispenser or the pucks.

Start-up:

1. Add pucks to floating dispenser and open to setting 4.
2. Add 2 tablespoons (28 grams) of Arctic Pure® Refresh per 1000 litres (265 gallons) of water.
3. Add 1 tablespoon (14 grams) of Arctic Pure® Boost per 1000 litres (265 gallons) of water.
4. Test the Chlorine level. Once the chlorine reads within the ideal range (1-3 ppm) turn tablet dispenser down to 1 - 2 (more or less according to bather load).
5. Start the Boost Filtration mode to circulate the chemicals and do not use spa for two hours after the mode ends.

Note: The above example is for a spa without an ozone system, if your spa is equipped with an ozone system please contact your dealer for proper levels.

Weekly:

1. Add pucks to floating dispenser and reset if necessary.
2. Add 2 tablespoons (28 grams) of Arctic Pure® Refresh per 1000 litres (265 gallons) of water.
3. Wait at least one hour and add 1 tablespoon (14 grams)of Arctic Pure® Best Defence per 1000 litres (265 gallons) of water.

Important: Arctic Pure® Refresh significantly reduces pH and TA. One hour after adding Arctic Pure® Refresh test and adjust TA and pH as needed.

Bromine System:

Note: If you are planning to use your new spa right away, Peak Boost must be added first. Follow directions for adding Peak Boost from this page.

1. Fill floating dispenser with pucks and open to setting 7.
2. Add 2 tablespoons (28 grams) of Arctic Pure® Refresh per 1000 litres (265 gallons) of water.
3. Add 2 1/2 tablespoons (35 grams) of Arctic Pure® Peak Boost per 1000 litres (265 gallons) of water, to establish a Bromide reserve.
4. Test the Bromine level. Once bromine reads within the ideal range (3-5 ppm) turn tablet dispenser down to 2 or 3 (more or less according to bather load).

Note: The above example is for a spa without an ozone system, if your spa is equipped with an ozone system please contact your dealer for proper levels.

Weekly

1. Twice a week test and adjust Total Alkalinity, pH and Chlorine or Bromine levels.

In extreme cases of sources water with high minerals (such as some well water), add 1 tablespoon (14 grams) per 1000 litres (265 gallons) of Arctic Pure® Best Defence weekly.

Important: Arctic Pure® Refresh significantly reduces pH and TA. One hour after adding Arctic Pure® Refresh test and adjust TA and pH as needed.

The use of Clarifiers and Foam inhibitors is not recommended with Arctic Pure® Disposable filters!

Common Spa Water Problems~Cause & Remedy

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
CLOUDY WATER	A. Poor Filtration	A. Dirty filter, clean with Arctic Pure® Filter Restore (not with disposable filter). Increase Filter cycle.
	B. Suspended particles	B. Add Arctic Pure® Easy Clear
	C. Organic contaminants build up	C. Shock treatment with Arctic Pure® Refresh
	D. pH high	D. Add Arctic Pure® Adjust Down until level reads 7.2-7.6
	E. Total alkalinity high	E. Add Arctic Pure® Adjust Down adjust TA level to 100-130ppm
	F. Combined chlorine in the water	F. Shock treatment until combined chlorine is eliminated (see container instructions)
	G. High dissolved solids	G. Empty spa and refill
	H. Hardness too high	H. Add Arctic Pure® Best Defence until level reads 15-280ppm
COLOURED WATER	A. Dissolved metals from equipment or water source	A. Use Arctic Pure® Best Defence and have your dealer check your water balance
	B. Low chlorine/bromine levels	B. Arctic Pure® Boost treatment and test chlorine/ bromine levels
	C. Fragrance	C. Stop the use of fragrance
FOAMING	A. High concentration of oils and organics being agitated by the jets	A. Squirt Foam Dissolve™ on foam. Refer to pg 20 for more information. (not with disposable filter)
SCALE DEPOSITS	A. High Calcium level, high pH, high alkalinity	A. Drain partially, add Arctic Pure® Best Defence, cor rect pH level to 7.2 - 7.6 and alkalinity to 100-130 ppm. It is also recommended you take a sample of water into your nearest Arctic Spa dealer for more assistance with this problem.
ODOR	A. High level of organic contaminants, combined with chlorine	A. Check pH and adjust as required. B. Shock with Arctic Pure® Refresh, add sanitizers C. Dilution D. Check any ozone system is operation
EYE/SKIN IRRITATION	A. pH to low B. Combined chlorine due to high concentration of organic contaminants C. Allergic reaction to sanitizer D. Bacterial contamination	A. Add Arctic Pure® Adjust Up until level reads 7.2 - 7.6ppm B. Add Arctic Pure® Refresh, add sanitizers. C. Change from Bromine to Chlorine or vice versa. D. Drain and refill spa.
NO CHLORINE/ BROMINE READING	A. High concentration of contaminants using up sanitizers	A. Add sanitizers until levels are up to the recommended levels
	B. Test kit reagents ineffective	B. Replace test kits at least once a year C. Chlorine/Bromine level very high and is bleaching test reagent, dilute sample 50:50 with fresh water retest and double the result. D. Possible bacterial contamination, have water tested by a lab.

Troubleshooting Spa Problems

1. **Nothing functions:** The RCD breaker has tripped or there is a power failure. Test RCD breaker. Turn breaker back on and see if spa powers up, if not contact your factory authorized dealer.

2. **Spa does not heat:** Check to see if the heat indicator is on or there are any error messages on the topside control panel. If the heat indicator is on and no error message appears contact your factory authorized dealer.

3. **Poor Jet Pressure:** First check to see that the jet(s) is turned on all the way. Check your filter to see if its clogged or dirty. Next, check to see if the jet(s) are obstructed or if the venturi air dial is turned on. Finally, check to see if the jets are surging, if so, your pump is cavitating (sucking in air). This usually occurs when the water level is too low and can be solved by adding water to the spa. If the problem still persists, contact your factory authorized dealer.

4. **Light is not functioning:** Check with your dealer. If it is necessary to replace the LED assembly, see the Light replacement section.

5. **Spa comes on by itself:** This function is normal when heating and filtering. No action required.

6. **Jet(s) is not spinning:** Remove jet barrel, by turning the jet counterclockwise until it pops out. Then irrigate the jet in the water (this will help remove any foreign particles that may be lodged in the bearings). If the jet(s) is still not spinning, it may be calcified. Try soaking the jet(s) in vinegar (be sure to cover the bearings) for ten minutes. Then irrigate the jet(s) again and re-install. If problem persists contact your factory authorized dealer.

7. **Spa doesn't drain completely:** The spa is drained by gravity. It will not always drain entirely. It isn't necessary to drain the spa entirely except for winterizing the spa. If you wish to remove the last little bit of water, we recommend you vacuum it out with a wet/dry shop vac.

Important

This manual and its contents are subject to change without notice. Although Blue Falls Manufacturing has prepared this manual as accurately and precisely as possible, Blue Falls Manufacturing will not be liable for loss, injury or damages caused by improper servicing or by use of spa (improper or otherwise).

www.coyotespas.com

Thorsby, Alberta, Canada
1-866-4-KIYOTE